



## ENERGY AND ENVIRONMENT CABINET

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Leonard K. Peters  
Secretary

August 28, 2014

Ms. Jennifer Woodard  
US Department of Energy  
Portsmouth/Paducah Project Site Office  
PO Box 1410  
Paducah, Kentucky 42002

**RE: Comments to the *Methods for Conducting Risk Assessments and Risk Evaluations at the Paducah Gaseous Diffusion Plant Paducah, Kentucky, Volume 1. Human Health (DOE/LX/07-0107&D2/R3/V1)***  
Paducah Gaseous Diffusion Plant  
Paducah, McCracken County, Kentucky  
KY8-890-008-982

Ms. Woodard:

The Kentucky Division of Waste Management (Division) has reviewed the redline draft of the 2014 revision to the Risk Methods Document (RMD), dated July 14, 2014. Kentucky has identified a few concerns.

Kentucky's Federal Facilities Agreement (FFA) Manager has consistently expressed some reservation with using a "2 men and a backhoe" scenario to calculate risk for an *outdoor worker* exposed to both surface and subsurface soils (aka, the future *construction/excavation worker*). This "2 men and a backhoe" construct assumes that the worker in question is exposed to one area of a certain size for a unit-specific period of time and then is never exposed again. The Division's concern stems from the inability to predict with any certainty over long periods of time the number of contaminated areas with which this future construction/excavation worker may come into contact. At smaller sites it may be appropriate to use a "2 men and a backhoe" type scenario to estimate reasonable maximum exposure for an excavation/ excavation worker. Under such conditions this scenario could likely be considered site-specific rather than unit-specific since the likelihood of further exposure to other areas of a small site would be minimal. However, at a large site like the PGDP where the public has a strong interest in seeing the

property redeveloped, it cannot be assumed in the absence of durable long-term land use controls (i.e., risk management) that a future construction/excavation worker will work only at a single SWMU over the course of their career. Similarly, it cannot be reasonably assumed, in the absence of durable long-term land use controls, that this worker will properly disposition the excavated soils instead of simply depositing them on the land surface where greater exposure would be possible.

EPA guidance suggests that it is appropriate to assume exposure durations of between 1 to 5 years for a construction/excavation worker. For the reasons stated above, the Division favors using a conservative exposure duration of 5 years coupled with an exposure frequency of 185 days/year as a site-specific (rather than unit-specific) reasonable maximum exposure assumption for the construction/excavation worker. The Division views these assumptions as being conservative enough as to obviate the need for a soil management plan or other controls while at the same time not being so conservative as to be unrealistic (e.g., 25 years).

Modifying the acceptable exposure duration for the construction/excavation worker in the RMD has possible implications for other documents such as the finalized *Soils Operable Unit Remedial Investigation Report* and the *Feasibility Study for Solid Waste Management Units 2, 3, 7, and 30*, which is currently under review. It appears that the “2 men and a backhoe” scenario was used in the Soils OU RI Report to calculate baseline risk for the construction/excavation worker. Construction/excavation worker PRGs presented in the SWMUs 2, 3, 7 and 30 FS were also generated using this unit-specific approach. The FFA parties should meet to discuss any necessary modifications to these documents once a suitable exposure duration and frequency for the construction/excavation worker have been agreed upon and the RMD has been approved.

If you have any questions or require additional information, please contact Todd Mullins at (502) 564-6716, or e-mail at [todd.mullins@ky.gov](mailto:todd.mullins@ky.gov).

Sincerely,

A handwritten signature in black ink that reads "April J. Webb". The signature is written in a cursive, flowing style.

April J. Webb, P.E., Manager  
Hazardous Waste Branch

AJW:lwv:tm

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